Remarks

Claims 1-6 are pending in this application. Claims 1 and 6 have been amended. New Claim 7 has been added. Support for new Claim 7 can be found on Figure 5 of the specification and beginning page 7, line 10.

Claims 1, 2 and 6 were rejected under 35 USC §102(e) as being anticipated by Trask (U.S. Patent No. 6,249,355). Claims 1, 3-6 were rejected under 35 USC §102(e) as being anticipated by Cheng et al. (U.S. Publication No. 2002/0089708). Claim 3 was rejected under 35 USC §103(a) as being unpatentable over Trask (U.S. Patent No. 6,249,355) as applied to Claim 1 and further in view of Curry (U.S. Patent No. 5,710,636). Claims 4 and 5 were rejected under 35 USC §103(a) as being unpatentable over Trask (U.S. Patent No. 6,249,355).

Claim 1, as amended, claims a method of constructing a halftone screen formed of supercells comprising: defining a halftone screen frequency and screen angle according to a predetermined requirement; defining a desired subcell having the predetermined frequency and screen angle requirement, wherein the subcell is substantially specified by two spatial vectors $v_1 = (x_1, y_1)$ and $v_2 = (x_2, y_2)$, wherein x_1, x_2, y_1, and y_2 are real numbers; forming a supercell comprising an array of the subcells, wherein the supercell is substantially specified by two spatial vectors $\mathbf{u}_1$ and $\mathbf{u}_2$ and wherein the relationship between the supercell and the subcell satisfies a supercell relationship: $k_1v_1 + k_2v_2 = \mathbf{u}_1$, and $k_3v_1 + k_4v_2 = \mathbf{u}_2$, where k_1, k_2, k_3 and k_4 are integer values such that the supercell and subcell have the property that when the supercell is tiled, the subcell can also be tiled; solving the supercell relationship for particular values of k_1, k_2, k_3 and k_4 given the defined halftone frequency and screen angle.

Claim 6, as amended, claims a method of constructing a halftone screen formed of supercells, comprising: selecting a frequency and screen angle of interest; identifying a subcell by spatial vectors which satisfies the selected frequency and screen angle of interest; forming a supercell comprising an array of the subcells, wherein an integer relationship exists between the supercell and the subcells, such that the supercell and subcell have the property that when the supercell is tiled, the subcell can also be tiled;

solving the integer relationship for particular integer values given the selected frequency and screen angle of interest; testing one of any resulting solutions according to any additional constraints or tolerances; and if any of the resulting solutions satisfies the testing, creating a halftone screen using the tested solution.

Trask teaches the use of hybrid halftone screens (screen formed of dot and line functions) to reduce moiré. Nothing in Trask teaches or suggests Applicants' method of constructing a halftone screen formed of supercells, "wherein the relationship between the supercell and the subcell satisfies a supercell relationship: $k_1v_1 + k_2v_2 = u_1$, and $k_3v_1 + k_4v_2 = u_2$, where k_1, k_2, k_3 and k_4 are integer values such that the supercell and subcell have the property that when the supercell is tiled, the subcell can also be tiled" as taught and claimed by Applicants. Trask does not teach any particular method for creating a halftone screen formed of supercells. Nor does Trask recognize any special relationship between the selection of the subcells and the supercell as taught by Applicants. According to Trask, "any halftone cell (or supercell) suitable for tiling onto any output pixel grid may be used to define an output pixel geometry table." See col. 7, lines 24-27.

Cheng teaches the use of dot and line screens to avoid moiré. Nothing in Cheng teaches or suggests Applicants' method of constructing a halftone screen formed of supercells, "wherein the relationship between the supercell and the subcell satisfies a supercell relationship: $k_1v_1 + k_2v_2 = u_1$, and $k_3v_1 + k_4v_2 = u_2$, where k_1, k_2, k_3 and k_4 are integer values such that the supercell and subcell have the property that when the supercell is tiled, the subcell can also be tiled" as taught and claimed by Applicants.

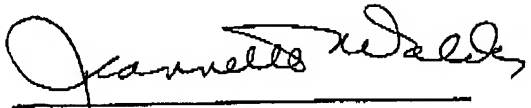
Claims 1 and 6 are believed to be in condition for allowance. Claims 2-5 and 7 depend from Claim 1 and are also believed to be in condition for allowance. Claims 1-7 are believed to be in condition for allowance.

No additional fee is believed to be required for this amendment; however, the undersigned Xerox Corporation attorney hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025.

Reconsideration of this application and allowance thereof are earnestly solicited. In the event the Examiner considers a personal contact advantageous to the disposition of

this case, the Examiner is requested to call the undersigned Attorney for Applicants, Jeannette Walder.

Respectfully submitted,



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